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| 10/647,073 | 08/22/2003 | Yuji Ishii | FUJZ 20.589 (100794-00475 | 9701 |

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| EXAMINER | |
|---|---|
| DO, CHAT C | |

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| 2193 | |

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/647,073 | ISHII ET AL. | |
| | Examiner | Art Unit | |
| | Chat C. Do | 2193 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *12 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

1. This communication is responsive to Amendment filed 04/12/2007.

2. Claims 1-5 are pending in this application. Claim 1 is independent claims. In Amendment, claims 6-7 are cancelled. This Office Action is made final.

### *Claim Rejections - 35 USC § 101*

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-5 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-5 cite a device for filtering an input string in accordance with a predetermined mathematical algorithm. In order for claims to be statutory, claims must either include a practical/physical application or a concrete, useful, and tangible result. However, claims 1-5 merely discloses components of the filter without disclosing a practical application or a tangible result because the claims appear to preempt every substantial practical application of the idea embodied by the claims. Further, no specific limitation/feature in the claim that breathes sufficient life and meaning into the preamble so as to limit it to a particular practical application rather than being so broad and sweeping as to cover every substantial practical application of the idea embodied therein. Therefore, claims 1-5 are directed to non-statutory subject matter.

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by David (U.S. 4,805,129).

Re claim 1, David discloses in Figures 6-7, 16, and 22-23 a digital filter device (e.g. Figure 7 as FIR filter) comprising: one or more computing processors for generating input data strings (e.g. as it needs at least one processor to generate input image signal to any of the Figures above and col. 1 lines 12-29); an input data memory for storing the input data strings (e.g. as the prestore 24, array store 26, and partial products store 28 for pushing data into the filter processes); and a digital filter for reading the input data strings out of the input data memory in a predetermined order (e.g. specific predetermined method of reading input data from memory is seen in col. 8 lines 29-59), regardless of the generating order of the input data by computing processors (e.g. the control means 60 in any of Figures above is configured to fetch data in predetermined order according to number of modes in cols. 13-26 independent from the input data 20 into the memory), to be filtered and for generating output data strings (e.g. the actual FIR filter is in Figure 7 and the output data string is the result of the last adder 48 in any Figures).

Re claim 2, David further discloses in Figures 6-7, 16, and 22-23 an output data memory for storing the output data strings generated by the digital filter (e.g. the partial products store memory 28), and a data processor for reading the output data strings stored in the output data memory in a predetermined order to be processed (e.g. control by the control means 60 along with 88 in Figure 23).

Re claim 3, David further discloses in Figures 6-7, 16, and 22-23 a switch table for associating an address of the input data memory in which the input data strings are stored with an address of the output data memory in which the output data strings are stored (e.g. as parameters to feed to the control means 60 in any above Figure to control the input string into the calculation means and Figure 21), and a switching controller for providing timings of reading the input data strings out of the input data memory based on the switch table and of writing the input data strings a the output data strings into the output data memory through the digital filter (e.g. control by the control means 60 along with 88 in Figures 22-23).

Re claim 4, David further discloses in Figures 6-7, 16, and 22-23 a filter memory for storing data-under-calculation upon filtering for a first input data string before filtering for a second input data string from filtering for the first input data string, in a delay circuit included in the digital filter (e.g. Figure 23 with feedback to store the partial product), and for restoring the data-under-calculation to the delay circuit when filtering the input data string subsequent to the first input data string is started (e.g. as tap storage as the array store).

Re claim 5, David further discloses in Figures 6-7, 16, and 22-23 one or more coefficient memories for storing a filter coefficient corresponding to each input data string of the digital filter (e.g. weighting coefficient calculator 32), a filter coefficient corresponding to an input data string to be filtered being set in the digital filter (e.g. col. 11 lines 11-21).

***Response to Amendment***

7. The amendment filed 04/12/2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

The amended/inserted limitation cited in page 4 claim 1 lines 5-6 "regardless of the generating...computing processors" is not supported or found by the original disclosure.

Applicant is required to cancel the new matter or clearly point-out how the amended/inserted limitation is supported in the original disclosure in the reply to this Office Action.

***Response to Arguments***

8. Applicant's arguments filed 04/12/2007 have been fully considered but they are not persuasive.

a. The applicant argues in page 6 third paragraph for claims 1-5 rejected under 35 U.S.C. 101 that the claim includes a tangible result, namely generation of output data strings in a predetermined order, and the utility is the filtering process itself.

The examiner respectfully submits that current claims 1-5 are still directed to non-statutory subject matter even though they generate filtered output data strings in a predetermined order. The claims 1-5 appear to preempt every substantial practical application of the idea of filtering input data string embodied by the claims. Furthermore, there is no specific limitation/feature in the claim that breathes sufficient life and meaning into the preamble so as to limit it to a particular practical application rather than being so broad and sweeping as to cover every substantial practical application of the idea embodied therein

b. The applicant argues in page 7 first paragraph for claim 1 rejected under 35 U.S.C. 102(b) that the reference by David fails to disclose one or more computing processors for generating input data strings and a digital filter for reading the input data strings out of the input data memory in a predetermined order, regardless of the generating order of the input data by the computing processors, to be filtered and for generating output data strings.

The examiner respectfully submits that the cited reference by David is either clearly and expressively or inherently disclosed every limitations of claim 1 as clearly addressed in the above rejection. Since the applicant does not clearly point out or explain how the citations of previous Office Action do not meet

limitations, the examiner would respectfully reiterative the rejection with further explanation below. The input data 20 in the reference is the image data which is generated by at least one computing processors as the image source in the background of invention. Any of Figures 6-7, 16, and 22-23 is a digital filter device for FIR filtering image input data in a predetermined order based on the control means 60. For instant in low compression mode of col. 13 line 52 to col. 14 line 25, the filter/arithmetic means is read 4x4 samples array of sixteen samples or words of the input signal for processing; wherein in horizontal compression mode of col. 14 line 28 to col. 16 line 10, the filter/arithmetic means is read 4x4 samples array from store 26 and 28 to form 8x4 output data regardless of the order to input data. Further, the output of any Figures 6-7, 16, and 22-23 to DVE as digital video effect unit is the FIR filtered output data string as claimed in the invention.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chat C. Do whose telephone number is (571) 272-3721. The examiner can normally be reached on M => F from 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chat C. Do
Examiner
Art Unit 2193

June 12, 2007